

**EXAMINING THE PERFECTIONISM-DEPRESSION LINK:
ACHIEVEMENT MOTIVATION AS A
MEDIATING VARIABLE**

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EXAMINING THE PERFECTIONISM-DEPRESSION LINK: ACHIEVEMENT MOTIVATION AS A MEDIATING VARIABLE

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The purpose of this study was to examine the relation between perfectionism and depression, and the role of achievement motivation in mediating that link. The participants were 94 males and 124 females from the University of Dayton who were fulfilling course requirements for an introductory psychology class. Three self-report paper-and-pencil inventories were administered, the Multidimensional Perfectionism Scale (MPS) to determine participants' levels of perfectionism, the Cassidy and Lynn Achievement Motivation Questionnaire (CLAMQ) to assess their levels of achievement motivation, and the Costello-Comrey Depression Scale (CCDS) to ascertain their proneness to depression.

The results indicated that self-oriented perfectionism and other-oriented perfectionism were significantly correlated with overall achievement motivation ($r = .54$, $p = .0001$ and $r = .36$, $p = .0001$, respectively). Simultaneous regressions revealed that socially prescribed perfectionism was significantly positively related to depression

proneness ($r = .53, p = .0001$) and self-oriented perfectionism was significantly negatively related to depression proneness ($r = -.27, p = .003$), as was achievement motivation ($r = -.30, p = .0001$). Achievement motivation was found to mediate the link between self-oriented perfectionism and depression proneness; the previously significant negative relation between self-oriented perfectionism and depression ($p = .003$) was no longer significant ($p = .382$) when the effect of achievement motivation was eliminated. The canonical correlation between the perfectionism factors (MPS) and the achievement motivation factors (CLAMQ) was significant with multiple dimensions. The canonical correlations were; first dimension, $R = .62, p < .001$; second dimension, $R = .36, p < .001$; and third dimension, $R = .27, p < .007$.

Results from the current study provide support for Horney's (1950) contention that perfectionists typically are highly motivated to achieve. The results indicate that higher levels of achievement motivation may serve as a buffer against depression in persons who tend to be perfectionistic. These results also support previous findings relating perfectionism variables to depression. Individuals who perceive a need to attain unrealistically high standards to meet expectations prescribed by significant others are more likely to become depressed.

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TABLE OF CONTENTS

APPROVAL	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	viii
LIST OF TABLES	ix
CHAPTER	
I. INTRODUCTION	1
Definition of Perfectionism	2
Etiology of Perfectionism	2
Perfectionism and Depression	6
Achievement Motivation	10
Perfectionism and Achievement Motivation	14
The Present Study.....	17
II. METHOD.....	19
Participants	19
Instruments	19
Multidimensional Perfectionism Scale (MPS)	19
Cassidy and Lynn Achievement Motivation Questionnaire (CLAMQ)	23
Costello-Comrey Depression Scale (CCDS).....	26
Procedure.....	26
III. RESULTS.....	28
IV. DISCUSSION	45
Strengths, Limitations, and Conclusions.....	50

APPENDICES..... 52

A. Demographic Information Cover sheet 53

B. Multidimensional Perfectionism Scale (MPS) 55

C. Cassidy and Lynn Achievement Motivation Questionnaire (CLAMQ) 58

D. Costello-Comrey Depression Scale (CCDS) .. 62

E. Informed Consent Form 66

F. Debriefing Statement 68

BIBLIOGRAPHY..... 70

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1 Canonical Correlation and Correlations with Canonical Variables: MPS and CLAMQ, Dimension 1	34
2 Canonical Correlation and Correlations with Canonical Variables: MPS and CLAMQ, Dimension 2	35
3 Canonical Correlation and Correlations with Canonical Variables: MPS and CLAMQ, Dimension 3	37

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Means and Standard Deviations For Depression Proneness, Perfectionism, and Achievement Motivation Variables	29
2 Linear Relations Among Depression Proneness, Perfectionism, and Achievement Motivation Variables	30
3 Simultaneous Regression of Perfectionism on Depression Proneness	31
4 Simultaneous Regression of Depression Proneness on Perfectionism Variables	38
5 Simultaneous Regression of Depression Proneness on Achievement Motivation Variables	40
6 Hierarchical Regression of Depression Proneness on Overall Achievement Motivation and Perfectionism Variables	41
7 Hierarchical Regression of Depression Proneness on Achievement Motivation and Perfectionism Variables	43

CHAPTER 1

INTRODUCTION

The present study investigates a concept which, until recently, has been discussed widely but studied little. The pursuit of perfection is something which pervades society today. Perfectionism represents a major portion of many of the messages we receive, especially from the media. It can be seen in both professional and amateur athletics, the beauty and fashion industry, and in commerce. Can this emphasis on perfection have damaging effects?

Perfectionism has been suggested as a symptom for anorexia, depression, obsessive-compulsive personality disorder, Type-A coronary-prone behavior, and a variety of other psychological and physical maladies. Focus is now being placed on the construct of perfectionism itself. Two areas which have been investigated are the relation of perfectionism to depression and to achievement. In general perfectionists have been found to tend to have higher levels of depression (e.g., Hewitt & Dyck, 1986; Hewitt & Flett, 1990; Hewitt, Mittelstaedt, & Flett, 1990) and lower levels of achievement (e.g., Burns, 1980).

The present study examines the relation between perfectionism and achievement motivation. More importantly, the study will investigate the role of achievement motivation in the relation between perfectionism and depression.

Definition of Perfectionism

In a review of the literature Kremeier (1985) compiled this definition of the perfectionist:

The perfectionist is one who demands unremittingly of himself and others a higher quality of performance than is required (English & English, 1958). His standards are beyond reach or reason. He measures his own worth entirely in terms of productivity and accomplishment. He is motivated by a fear of failure and believes that he could do better and should do better (Burns, 1980). His constant strivings are accompanied by feelings of not being good enough (Hamachek, 1978). He can feel worthwhile only if he is competent and achieving in all areas (Missildine, 1963). His overattention to detail causes him to miss the "big picture." He is intolerant of his mistakes and the mistakes of others (Meier & Sheffler, 1984, p. 28).

Etiology of Perfectionism

Various theories have been proposed to account for the development of perfectionism. Horney (1950) stated that perfectionism is a result of the necessity a person feels to turn into the idealized self, and from the conviction that this can be achieved. Horney talks about the "shoulds"; inner dictates which tell a person how one should act and what one should accomplish. When these "shoulds" are not obeyed, the person experiences violent emotional reactions "which traverse the whole range of anxiety, despair, self-condemnation, and self destructive impulses" (p. 74). The perfectionist operates on the premise that nothing should be, or is, impossible for oneself. The perfectionist's "inner dictates...do not aim at real change but at immediate and absolute perfection. They aim at making the imperfection disappear, or at making it appear as if the particular perfection were attained" (p. 72).

Adler (1956) stated that it is the innate drive of every human being to strive toward the goal of superiority, perfection, completion, or overcoming. This striving, in a neurotic, is compensatory, originating in a feeling of inferiority. The neurotic is more concerned with self-esteem, and has a personal goal of superiority (Adler, 1956). The "form and content of the neurotic guiding line originate from the impressions of the child who feels humiliated" (p. 109).

According to Missildine (1963), perfectionism is created in a child by "persistent parental demand, expressed in terms of what was expected from the child" (p. 94). When a child accomplishes something, the perfectionistic parent "subtly defers full approval and acceptance and urges the child to 'do better'" (p. 94). The child is left with the feeling of "If only I do better, I will gain the full acceptance and approval of my parents" (p. 94). The disapproval of the perfectionistic parents, and the promise of eventual approval, reinforce the child's own perfectionist behavior (Missildine, 1963).

Along these same lines Burns (1980) has suggested that

perfectionism may be in part learned from a child's interactions with perfectionistic parents. This is the way I see the process working: a child is regularly rewarded with love and approval for outstanding performance; when the parents react to the child's mistakes and failures with anxiety and disappointment, the child is likely to interpret that as punishment or rejection. The perfectionistic parent often feels frustrated and threatened when a child is having difficulties in schoolwork or in relationships with peers. Because the parent is unrealistically self-critical, he or she personalizes the child's difficulties by thinking, 'This shows what a bad mother (or father) I am.' Because the parent's self-esteem is contingent on the child's success, the parent puts great pressure on the child to avoid failure. Consequently, when the troubled child turns to the parent for reassurance or guidance, the parent reacts with irritation, not love, and the child is flooded with shame. (p. 41)

Albert Ellis (1989) has theorized that human beings may be born with an innate tendency to engage in certain self-defeating thinking patterns, including perfectionism. He states that virtually all serious emotional problems directly stem from magical, empirically unvalidatable thinking (Ellis, 1989). Ellis (1962) names two "irrational beliefs" that may contribute to perfectionism. The first is the belief "that there is invariably a right, precise, and perfect solution to human problems and that it is catastrophic if this perfect solution is not found" (p. 86). This belief is highly unrealistic and it is irrational to expect that there will always be a perfect solution. The second "irrational belief" is "that one should be thoroughly competent, adequate, and achieving in all possible respects if one is to consider oneself worthwhile" (p. 86). This sets an impossible goal for one to achieve and bases one's self-worth on expectations which are overly high.

Hamachek (1978) has differentiated between the normal perfectionist and the neurotic perfectionist. He has stated that normal perfectionists are those "who derive a very real sense of pleasure from the labors of a painstaking effort and who feel free to be less precise as the situation permits" (p. 27). This is in sharp contrast to neurotic perfectionists who feel their efforts are never good enough and they should do better. They are unable to feel satisfaction for an achievement which is less than perfect but adequate for the situation. This is because "in their own eyes they never seem to do things good enough to warrant that feeling" (p. 27).

Hamachek (1978) has further stated that normal perfectionists are better able to establish performance boundaries which take into account their limitations, whereas, neurotic perfectionists set for themselves levels of performance which are impossible to

attain. Normal perfectionists are motivated by a desire for improvement. Neurotic perfectionists are motivated more by a fear of failure (Hamachek, 1978).

The development of the neurotic and normal perfectionist, according to Hamachek, takes different paths. The neurotic perfectionist is brought up in one of two emotional environments. The first of these is an environment of non-approval or inconsistent approval (Hamachek, 1978). In an environment such as this a person "lacks the necessary feedback for comparing actual performance with external standards" (p.29). Because he or she does not know what is "good," the person is left with a sense of doubt and uncertainty. The budding perfectionist begins to compensate by setting personal standards which are unreasonably high and impossible to attain (Hamachek, 1978).

The second environment which fosters neurotic perfectionists is one of conditional positive approval. In this environment certain conditions must be met before a child is given any type of external approval. When this type of approval is more prominent than unconditional positive approval the child begins to understand that performance is valued more than the self (Hamachek, 1978). The child learns that it is through performance that approval is gained.

Hewitt and Flett (1991) have presented a view of perfectionism as a multidimensional construct. They describe this construct as consisting of self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism (Hewitt & Flett, 1991). The basic difference among these dimensions is the object to whom the perfectionistic behavior is directed or to whom the perfectionistic behavior is attributed.

Self-oriented perfectionism includes behaviors such as setting exacting standards for oneself and stringently evaluating and censuring one's own behavior, striving to attain perfection in one's endeavors, as well as striving to avoid failure (Hewitt & Flett, 1991).

Other-oriented perfectionism is demonstrated by setting unrealistic standards for significant others, placing importance on other people being perfect, and stringently evaluating others' performance (Hewitt & Flett, 1991). The other-oriented perfectionist, therefore, has expectations similar to those of the self-oriented perfectionist; however, these expectations are directed toward others. Instead of being critical of themselves, the other-oriented perfectionists are highly critical of others.

Socially prescribed perfectionism is the need to attain standards and expectations that are believed to be prescribed by significant others. "Socially prescribed perfectionism entails people's belief or perception that significant others have unrealistic standards for them, evaluate them stringently, and exert pressure on them to be perfect" (Hewitt & Flett, 1991, p. 457). "Because individuals with high levels of socially prescribed perfectionism are concerned with meeting others' standards, they should exhibit a greater fear of negative evaluation and place greater importance on obtaining the attention but avoiding the disapproval of others" (Hewitt & Flett, 1991, p. 457).

Perfectionism and Depression

What kind of negative impact can perfectionistic tendencies have on an individual? Hewitt and Dyck (1986) studied the relation between stressful life events, perfectionism, and depression, in a university sample. One-hundred and five male and female college students completed the Beck Depression Inventory (BDI), a 21-item self-report scale that

assesses the severity of depressive symptomatology (Beck, Rush, Shaw, & Emery, 1979); the Perfectionism Scale (PFS), a 10-item self-report scale intended to assess the level of perfectionistic thinking (Burns, 1980) twice, two months apart; and the Social Readjustment Rating Scale (SRRS), a well established measure of stressful life events (Holmes & Rahe, 1967). Results of the study suggested that perfectionistic attitudes are associated with current depression level, and the relation between stressful life events and depression is significantly elevated among perfectionistic individuals (Hewitt & Dyck, 1986).

Hewitt and Flett (1990) tested the hypothesis that the various dimensions of perfectionism are related to levels of depression. One-hundred fifty university students completed three measures of depression: the BDI (Beck et al., 1979), the Zung Self Rating Scale (Zung & Durham, 1965), and the Depressive Experiences Questionnaire (DEQ; Blatt, D'Afflitti, & Quinlan, 1976). Subjects also completed questionnaires which assessed different dimensions of perfectionism. These questionnaires measured self-oriented perfectionism, perfectionistic motivation, other-oriented perfectionism, and world-oriented perfectionism. Finally, subjects were provided with a list of 10 adjectives reflecting perfectionistic content and 10 adjectives that were neutral in content and asked to rate whether these adjectives were self descriptive. Results of the study support the hypotheses that perfectionism is a multidimensional construct and that several of these dimensions contribute to depression. All of the perfectionism measures, except world-oriented perfectionism, related positively to depression. Greater depression was associated with higher levels of perfectionism for oneself and for others, and this was accompanied by reports of a greater need to be perfect.

Hewitt, Mittelstaedt, and Flett (1990) have empirically examined Adler's (1956) contention that neurotic perfectionism entails high standards and the need to be superior in all activities, and that these characteristics interact in producing neurotic symptoms such as depression. Fifty male and female college students were asked to rate the importance of 14 areas of performance that varied in their relevance to college students. Additionally, they were given the Perfectionism Scale (PS) and the BDI. Results of this study supported the hypothesis that perfectionism interacts with generalized performance importance in predicting depression (Hewitt et al., 1990). Individuals with perfectionistic standards who express the need to perform well in most activities may be prone to experience depression.

Burns (1983) has examined the relation between perfectionism and life satisfaction in middle-management sales executives. He administered the PFS and a questionnaire rating personal, career, and relationship satisfaction to 64 middle-management sales executives. He found that executives scoring higher in perfectionism rated their satisfaction as lower.

Hewitt and Flett (1991a) used a multidimensional perspective to examine whether clinically depressed individuals are characterized by high levels of perfectionism. The subjects consisted of a group of 22 patients diagnosed with depression who were admitted to an acute care psychiatric unit, a group of 13 patients diagnosed with an anxiety disorder who were admitted to an acute care psychiatric unit, and a group of 22 normal controls who were matched on age and gender with the depressed group. Subjects were given the Multidimensional Perfectionism Scale (MPS), the BDI, and the Endler Multidimensional Anxiety Scales-State (EMAS-S; Endler, Edwards, Vitelli, & Parker, 1989), a 20-item self-

report measure of the autonomic-emotional and cognitive-worry components of state anxiety. The results showed that the depressed patients were differentiated from the other subjects by a higher level of self-oriented perfectionism (Hewitt & Flett, 1991a). This suggests that higher levels of self-oriented perfectionism may be specific to clinical depression but may not generalize to clinical anxiety. Additional findings showed that both depressed and anxious patients had higher levels of socially-prescribed perfectionism than normal controls (Hewitt & Flett, 1991a). This indicates that socially-prescribed perfectionism is a feature of depression but is not necessarily specific to depression.

Flett, Hewitt, Blankstein, and O'Brien (1991) examined the degree to which the various perfectionism dimensions are related to subclinical depression. One hundred three undergraduates were administered the Multidimensional Perfectionism Scale; the Beck Depression Inventory; the Self-Control Schedule (SCS; Rosenbaum, 1980), a 36-item instrument that measures the extent to which a person perceives that he or she is capable of regulating various internal events that may interfere with the execution of a particular target behavior; and the Rosenberg Self-Esteem Scale (Rosenberg, 1965), a 10-item scale measuring general self-esteem. Results of this study indicated that socially-prescribed perfectionism was the perfectionism dimension most closely associated with depression in college students (Flett et al., 1991). This indicates that a perception that others have perfectionistic expectations for oneself is related to increased levels of depression. The authors also found that socially-prescribed perfectionism was associated significantly with reduced self-esteem (Flett et al., 1991).

In a similar study Preusser, Rice, and Ashby (1994) investigated self-esteem as a mediator of the association between perfectionism and depression. One hundred sixty-

seven undergraduate volunteers were administered the MPS, the Rosenberg Self-Esteem Scale, and the BDI. Results suggest that self-esteem mediates the association between socially-prescribed perfectionism and depression in both men and women. Self-esteem played a mediating role between self-oriented perfectionism and depression only in women (Preusser et al., 1994).

Achievement Motivation

Achievement motivation has been defined as "task-oriented behavior that allows the individual's performance to be evaluated according to some internally or externally imposed criterion, that involves the individual in competing with others, or that otherwise involves some standard of excellence" (Smith, 1969, p. 13).

Murray (1938) described personality as a series of needs, including the need to achieve. He described this need as a "desire or tendency to do things as rapidly and/or as well as possible" (p. 60). He further stated that the need to achieve is "to master, manipulate and organize physical objects, human beings, or ideas," and "to overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others" (p. 60). Murray felt that needs are unconscious, "an organic potentiality or readiness to respond in a certain way under given conditions" (p. 60).

In a study building on Murray's view that motives are personality traits and are stable over time, McClelland, Atkinson, Clark, and Lowell (1953) estimated individuals' achievement motivation using the Thematic Apperception Test (TAT). Subjects were shown stimulus pictures and were asked to tell a story about the picture. The stories were scored for achievement imagery. The authors accepted Murray's view that achievement

motivation is internal and, therefore, influenced the stories subjects told. Thus, although achievement motivation can be aroused by environmental cues, it is an enduring trait that affects behavior.

Atkinson (1966) described motives in general and the achievement motive in particular in this way:

A motive is conceived as a disposition to strive for a certain kind of satisfaction, as a capacity for satisfaction in the attainment of a certain class of incentives. The names given motives--such as achievement--are really names of classes of incentives which produce essentially the same kind of experience of satisfaction [for example, in the case of the achievement motive]: pride in accomplishment.... The general aim of one class of motives, usually referred to as appetites or approach tendencies, is to maximize satisfaction of some kind. The achievement motivation is considered a disposition to approach success. (p. 13)

The concept of achievement motive, defined as a stable personality characteristic, was incorporated into a larger theory of achievement motivation proposed by Atkinson (1957), called expectancy-value theory. This theory specifies that the strength of the achievement motive actually aroused in any achievement-oriented situation is determined by the sum of two tendencies with opposing signs:

1. The tendency to approach success, which is manifested by engaging in achievement-oriented activities.
2. The tendency to avoid failure, which is manifested by not engaging in these activities.

The strength of each of these opposing tendencies is determined by three components:

1. The motive to approach success or the motive to avoid failure.
2. The expectancy that an achievement-oriented act will result in success or the probability that it will result in failure.

3. The incentive value of success or the incentive value of failure.

These three components, associated with the tendency to approach success and with the tendency to avoid failure, are assumed to combine multiplicatively to determine the strength of each of these tendencies. These two tendencies, in turn, sum algebraically to determine the strength of the resultant achievement motivation (Atkinson, 1957).

Horner (1968) added to expectancy-value theory with the motive to avoid success. This motive, which is acquired early in life, is a tendency to become anxious about achieving success. This fear of success is theorized to reduce resultant achievement motivation and, therefore, inhibit achievement-related behavior.

Atkinson (1974) revised his expectancy-value theory to more broadly account for achievement-seeking behavior. His original theory stated that the tendency to approach success is weighted against a tendency to avoid failure. These tendencies were determined by the motive to approach success, the probability of success or failure, and the value of the success or failure for the individual. His revision included the tendency to seek extrinsic rewards. In an individual who is more afraid of failure, these extrinsic rewards could swing the balance of motivation toward achievement.

Helmreich, Beane, Lucker, and Spence (1978) proposed a multidimensional approach to achievement motivation. They used a three component measure of achievement motivation which included Work Orientation, Mastery Needs, and Competitiveness. A sample of 103 male scientists on the faculty of the University of Texas at Austin completed a self-report instrument, generated by the authors, that measured intellectual mastery, orientation toward work, and competitiveness. They applied this measure to a criterion from the Science Citation Index, a measure of scientific

achievement, for these same scientists. Significant interactions between Work and Mastery and Work and Competitiveness were found. Additionally, the authors found that scientists with the highest number of citations were those who scored high on both Work and Mastery and those with the fewest citations were low on Work and high on Mastery.

Spence and Helmreich (1983) built on the previous study and further developed an objective measure of achievement motivation. The Work and Family Orientation Questionnaire (WOFO; Helmreich & Spence, 1978) is a self-report measure of three different factors of intrinsic achievement motivation. These are Work Orientation, which represents an effort dimension, the desire to work hard and do a good job; Mastery, which reflects a preference for difficult, challenging tasks and for meeting internally prescribed standards of performance excellence; and Competitiveness, which describes the enjoyment of interpersonal competition and the desire to win and be better than others. The authors contend that each of these factors is independent and that they sum to describe an individual's achievement motivation.

Spence and Helmreich (1983) administered the WOFO to varsity athletes, business persons, academic psychologists, and unselected students. Results of the study indicated that the differences in work, mastery, and competitiveness between unselected students and members of highly achieving groups reflect the role of achievement motives in promoting successful attainment. The authors conclude that within groups having relatively similar abilities and interests, achievement motives are related to real-life attainment.

Parker and Chusmir (1991) studied the relation between motivation needs (achievement and power) and six measures of life success (status/wealth, contribution to

society, professional fulfillment, family relationships, personal fulfillment, and security). Subjects were 756 full-time managerial and non-managerial service industry workers. The authors administered their Life Success Measures Scale (LSMS; Chusmir & Parker, 1991) to measure life success and the Manifest Needs Questionnaire (MNQ; Steers & Braunstein, 1976) as a measure of needs of achievement and power. Results indicated that need for achievement is positively related to strivings for status/wealth, professional fulfillment, and contribution to society. It is negatively related, however, to personal fulfillment and security (Parker & Chusmir, 1991).

Perfectionism and Achievement Motivation

Several studies have investigated the relation between perfectionism and achievement. Burns (1980) used the Perfectionism Scale, which he developed, to measure the effects of perfectionism on sales success. Thirty-four highly successful insurance agents were administered the Perfectionism Scale. Scores on the scale were correlated with yearly income of the insurance agents. Those agents who scored higher in perfectionism earned less per year than those who were less perfectionistic. Those insurance agents who were overly attentive to details and who held unrealistically high standards for themselves were unable to achieve as much as those agents who were able to adjust their standards to a more realistic level. The agents' perfectionism interfered with their level of achievement.

Contrary to Burns' (1980) study, Adderholt (1984) found no significant relation between perfectionism and achievement. She administered the Burns Perfectionism Scale (Burns, 1980) to college students and compared these scores with grade point average and

scores on the Scholastic Aptitude Test. Although Adderholt (1984) found no significant relation between perfectionism and achievement, she did find that perfectionists' achievement was more variable than non-perfectionists. After subsequent interviews with the perfectionists in the study, Adderholt (1984) concluded that perfectionists may choose to succeed in one area and not in others. Therefore, an individual may score high on the Perfectionism Scale but not be perfectionistic in all areas of his or her life. Note that these studies have focused on the relation between perfectionism and achievement, not perfectionism and achievement motivation. It would be erroneous to conclude that, because perfectionists may have lower levels of achievement, they have lower levels of achievement motivation.

Horney (1950) stated that perfectionists' achievement motivation can be either internal or external. According to Horney (1950) perfectionists can be externally motivated to achieve because they have learned that recognition of personal worth is dependent upon their level of achievement. Recognition of achievement is a way to make feelings of rejection tolerable. Perfectionists also can be internally motivated to achieve because of their unconscious feelings of inferiority and the necessity to become their idealized selves. Achievement gives perfectionists a way of making the imperfection disappear, or of allowing them to feel as if the particular perfection was attained. Perfectionists, then, according to Horney, should be highly motivated to achieve, and therefore score higher on measures of achievement motivation.

Horney (1950) and Adderholt (1984) have suggested that perfectionists sense of achievement may not be limited to academic or vocational success, but can be found in a number of areas. The area of achievement varies among individuals. A more productive

avenue of research than the study of perfectionism and achievement, then, would be to relate perfectionism and the construct of achievement motivation.

Fresques (1991) has tested the relation of perfectionism and achievement motivation. He administered the Perfectionism Scale (Burns, 1980), the Work and Family Orientation Questionnaire (Helmreich & Spence, 1978), and the neuroticism subscale of the NEO Personality Inventory (Costa & McCrae, 1985). The author found that, as hypothesized by Horney, those scoring higher on a measure of perfectionism scored higher on measures of neuroticism and achievement motivation (Fresques, 1991).

Hamachek (1978) has discussed the motive to achieve in normal and neurotic perfectionists. Normal perfectionists set high standards for themselves yet "feel free to be less precise as the situation permits" (p. 27). Because they allow themselves a wide range of freedom for self-evaluation, normal perfectionists are thought to be motivated by needs for achievement. Striving for perfectionism brings them satisfaction and enhances their self-esteem. Neurotic perfectionists, however, set high standards for themselves in every situation. They are thought to be motivated by fears of failure as a result of the narrow range of freedom for self-evaluation (Hamachek, 1978). Both types of perfectionists, though, set such unrealistically high goals that they cannot possibly succeed all the time. Thus, they often are frustrated by their need to achieve and their failure to do so. When perfectionism becomes pathological and interferes with achievement, as is the case with the neurotic perfectionist, the result can be depression. Achievement motivation, then, may help explain the association between perfectionism and depression.

The Present Study

The present study uses the work of Karen Horney as a theoretical basis upon which to understand the personality dynamics of perfectionism. Although other authors have restated Horney's theory (Burns, 1980; Hamachek, 1978), Fresques (1991) is the only study that empirically tests Horney's contention that individuals high in perfectionism tend to be high in achievement motivation. The present study similarly tests this aspect of Horney's theory.

Additionally, the present study examines the link among perfectionism, achievement motivation, and depression. A great deal of research has connected perfectionism and depression (Flett, Hewitt, Blankstein, & O'Brien, 1991; Hewitt & Dyck, 1986; Hewitt & Flett, 1990; Hewitt & Flett, 1991; Hewitt, Mittelstaedt, & Flett, 1990; Preusser, Rice, & Ashby, 1994). Research also has related high achievement needs to low personal fulfillment and security (Parker & Chusmir, 1991). Furthermore, Burns (1980) has shown a link between perfectionism and lower levels of achievement. It seems likely, then, that perfectionism should be related to depression only when achievement motivation is present. The present study, therefore, examines achievement motivation as a mediating variable between perfectionism and depression.

The present study examines four hypotheses:

1. Individuals with higher levels of perfectionism have higher levels of achievement motivation.
2. Individuals with higher levels of perfectionism have higher levels of depression proneness.

3. Individuals with higher levels of achievement motivation have higher levels of depression proneness.
4. Individuals with higher levels of perfectionism have higher levels of depression proneness only in the presence of achievement motivation.

CHAPTER II

METHOD

Participants

Participants were 218 (94 males, 124 females; M age = 18.8, SD = 1.04) undergraduate students in an introductory psychology course at the University of Dayton, a private Catholic institution located in Dayton, Ohio. Students were awarded course credit for participating in the study.

Instruments

Demographic sheet. A short questionnaire was used to gather information regarding age, sex, and class standing (see Appendix A).

The Multidimensional Perfectionism Scale. The Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991b) is a 45-item, self-report inventory consisting of three subscales measuring self-oriented perfectionism, other-oriented perfectionism, and socially-prescribed perfectionism (see Appendix B). Each subscale consists of 15 items. Each item is rated on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). A composite perfectionism score is computed, along with separate perfectionism scores on each of the three subscales. The composite score can range from 45 to 315. Scores on each of the subscales range from 15 to 105. Higher scores indicate higher levels of perfectionism.

The Self-Oriented Perfectionism subscale is designed to measure self-directed perfectionistic behaviors such as setting exacting standards for oneself and stringently evaluating and censuring one's own behavior, as well as striving to avoid failure. Items on this subscale include "I must work to my full potential at all times," and "One of my goals is to be perfect in everything I do."

The Other-Oriented Perfectionism subscale measures the extent to which a person sets unrealistic standards for significant others, places importance on other people being perfect, and stringently evaluates others' performance. Items on this subscale include "If I ask someone to do something, I expect it to be done flawlessly," and "The people who matter to me should never let me down."

The Socially-Prescribed Perfectionism subscale measures the extent to which a person perceives that significant others have unrealistic standards for them, evaluate them stringently, and exert pressure on them to be perfect. Items on this subscale include "My family expects me to be perfect," and "The people around me expect me to succeed at everything I do."

The 45 items on the MPS were extracted from an original pool of 122 items. These potential items were administered to 156 undergraduates at a Canadian university who were asked to rate them on a seven-point Likert scale. Subjects also completed the Marlowe-Crowne Social-Desirability Scale (Crowne & Marlowe, 1960). An item was selected if it had a mean score between 2.5 and 5.5, a correlation greater than .40 with its respective subscale, and a correlation less than .25 with the other subscales. Items were retained only if they had a correlation of less than .25 with social desirability. These

criteria resulted in the 45 items used for the MPS, with three subscales of 15 items each (Hewitt & Flett, 1991b).

Item to subscale total correlations were computed for each of the 45 items and ranged between .51 and .73 for self-oriented items, .43 and .64 for other-oriented items, and .45 and .71 for socially-prescribed items. The coefficient alphas revealed adequate internal consistency with the overall scale equal to .89, self-oriented perfectionism equal to .86, other-oriented perfectionism equal to .82, and socially-prescribed perfectionism equal to .87. Intercorrelations among the MPS subscales ranged between .25 and .40 which indicates some degree of overlap. These intercorrelations, however, are low compared to the subscale alpha correlations, and, therefore, it was concluded that the three subscales are relatively distinct from one another and are not simply alternate forms of the same dimension (Hewitt & Flett, 1991b). Split-half reliabilities were .92 for the overall scale, .86 for the self-oriented, .79 for the other-oriented, and .82 for the socially-prescribed subscales. Test-retest reliabilities over a three-month period were .88 for self-oriented perfectionism, .85 for other-oriented perfectionism, and .75 for socially-prescribed perfectionism (Hewitt & Flett, 1991b).

Factor analysis substantiated that three factors corresponding to the three subscales of the MPS should be retained. These three factors accounted for 36% of the variance. Factor loadings ranged from .45 to .66 on the first factor, the self-oriented items; .39 to .63 on the second factor, the socially-prescribed items; and .38 to .63 on the third factor, the other-oriented items (Hewitt & Flett, 1991b).

Convergent and discriminant validity were assessed by comparing the relation of the MPS subscales to various other measures. Subjects completed the MPS and measures

which assessed attitudes toward self, degree of blame or criticism that is directed toward the self, individual differences in authoritarian behavior, dominance behavior directed toward others, fear of being evaluated negatively, need for approval, locus of control, academic standards, narcissistic tendencies, and general maladjustment. Self-oriented perfectionism was significantly correlated with self-related measures such as high self-standards, self-ratings of importance, the importance of attaining one's goals, high self-criticism, and self-blame. Socially-prescribed perfectionism was significantly correlated with measures of demand for approval from others, fear of negative evaluation by others, the importance of meeting other people's performance expectations and the ideal standards prescribed by others, and an external locus of control. Other-oriented perfectionism was significantly correlated with measures of other-directed blame, authoritarianism, and dominance (Hewitt & Flett, 1991b).

There were some indications of discriminant validity of the MPS. Self-oriented perfectionism was the only MPS dimension correlated with the self-ratings of the importance of performance and goal attainment. There were certain other measures, however, which were correlated with more than one perfectionism dimension. Self-criticism, for example, was associated positively with all three perfectionism dimensions (Hewitt & Flett, 1991b).

The MPS was chosen as the measure of perfectionism in this study because it gives a composite measure of the construct of perfectionism as well as measures of three different dimensions of perfectionism. Administering the MPS along with measures of achievement motivation and depression makes it possible to see how the overall construct

of perfectionism and the dimension of self-oriented perfectionism relate to achievement motivation and depression.

The Cassidy and Lynn Achievement Motivation Questionnaire. The Cassidy and Lynn Achievement Motivation Questionnaire (CLAMQ; Cassidy & Lynn, 1989) is a 49-item, self-report inventory which measures seven factors associated with achievement motivation (see Appendix C). These are Work Ethic, Acquisitiveness (for money), Dominance, Excellence (the pursuit of), Competitiveness, Status Aspiration, and Mastery. Each item is presented using the Agree, Neutral, Disagree response format and scored 0, 1, 2 or 2, 1, 0 as appropriate. A composite achievement motivation score is computed, along with separate scores on each of the seven factors. The composite score can range from 0 to 98. Scores on each of the subscales can range from 0 to 14. Higher scores indicate higher levels of achievement motivation.

The Work Ethic (WE) factor is based on finding reinforcement in performance itself. It incorporates 'the desire to work hard' (Spence & Helmreich, 1983). It is seen as a motivational attribute of the individual which influences attitudes, values, and behavior. Items from this factor include "Hard work is something I like to avoid," and "I like to work hard."

The Pursuit of Excellence (Exc) factor is described as motivation that finds reward in performing to the best of one's ability. Murray (1938) introduced the concept as the basis for all intrinsic achievement motivation. Items from this factor include "I hate to see bad workmanship," and "I find satisfaction in working as well as I can."

Status Aspiration (SA) is motivation which is reinforced by climbing the social status hierarchy. This concept stems from the sociological and ethological notion of

human social behavior in terms of pecking orders in a social hierarchy. Items from this factor include "I like talking to people who are important," and "I would like an important job where people looked up to me."

Dominance (Dom) is closely related to Status Aspiration. This factor includes the desire to be dominant and to be a leader. Items from this factor include "If given the chance I would make a good leader of people," and "I like to give orders and get things going."

The factor of Competitiveness (Com) can be described as the enjoyment of competition with others with the ultimate goal of winning. This factor deals with competition with others which is in contrast to Exc, where competition is with one's own standard of excellence. Items on this factor include "I try harder when I am in competition with other people," and "It is important to me to perform better than others on a task."

Acquisitiveness for money and material wealth (Acq) is motivation based on the reinforcing properties of material reward. Items on this factor include "As long as I am paid for my work, I don't mind working while others are having fun," and "The most important thing about a job is the pay."

Mastery (Mast) measures an individual's motivation to tackle a difficult task and to succeed in the face of difficulty. It measures how reinforcing to a person are the properties of problem solving. Items on this factor include "I prefer to work in situations that require a high level of skill," and "I more often attempt tasks that I am not sure I can do than tasks I know I can do."

The 49 items on the CLAMQ were developed from an original pool of 102 items. The sources of these items were: Jackson et al. (1976) Work Orientation Scale (WOS),

28 items; Lynn et al. (1983) Achievement Motivation Questionnaire, 20 items; Spence and Helmreich (1983) Work and Family Orientation Questionnaire (WOFO), 19 items; Warr, Cook, and Wall (1979) 5-item Work Involvement Scale, 2 items; and 33 new items.

These potential items were put together in a questionnaire format using the Yes-No response format and scored 0, 1, 2 or 2, 1, 0 as appropriate. The questionnaire was then administered to 427 university students. Items were analysed using principal component analysis and varimax rotation into simple structure. Seven identifiable factors, with eigenvalues above 2.0 were produced. The seven items with the highest factor loading in each factor were selected as the defining items for each factor.

Internal reliability as measured by Cronbach's reliability coefficient alpha ranged from .55 to .81. Split-half reliability ranged from .52 to .81. Although there was some evidence of factor overlap, Cassidy and Lynn (1989) argued that "the intuitive distinction between these factors justifies their consideration as separate dimensions" of achievement motivation (p. 310). Evidence of scale validity was produced by correlating the subscales with the subscales of the WOFO and the Lynn et al. questionnaire. The correlations were highly significant.

The distribution of variance among the factors was calculated. Work Ethic represented the largest percentage of variance with 33.0. Acquisitiveness was 21.5; Dominance, 12.8; Pursuit of Excellence, 11.0; Competitiveness, 8.6; Status Aspiration, 7.9; and Mastery, 5.1.

The Cassidy and Lynn Achievement Motivation Questionnaire was chosen as the measure of achievement motivation for this study because it uses a multifactorial

approach, is modeled on existing measures, and contains many of the original items from the parent sources.

Costello-Comrey Depression Scale. The Costello-Comrey Depression Scale (CCDS; Costello & Comrey, 1967) was developed to measure the tendency to experience a depressive mood (see Appendix D). The scale was designed to measure the particular symptom of depressive affect and is not meant to be a substitute for the Beck Depression Inventory, which measures the severity of state depression. The CCDS consists of 14 items rated on a nine-point scale (1 = Absolutely not, 9 = Absolutely). The ratings for each item are summed to obtain an individual's total score. Items on the CCDS include "I feel that life is worthwhile," "I wish I were never born," and "My future looks hopeful and promising." The CCDS has split-half reliability of .90 and test-retest reliability of .79 (Costello & Comrey, 1967). Additionally, the selection of the items, based upon repeated factor analyses using hundreds of items from various measures and large samples of normal subjects, provides support for content validity of the scale (Mayer, 1977).

The CCDS was chosen as the measure of depression for this study because it measures a person's tendency to experience a depressive affect over time instead of the severity of state depression.

Procedure

Participants were run in groups of 10 to 20 students. After completing an informed consent form (see Appendix E), each participant received a packet containing a series of questionnaires consisting of the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991), the Cassidy and Lynn Achievement Motivation Questionnaire

(CLAMQ; Cassidy & Lynn, 1989), the Costello-Comrey Depression Scale (CCDS; Costello & Comrey, 1967), and the demographics sheet. The order of presentation of the questionnaires in each of the packets was counterbalanced by means of systematic rotation. Since three instruments were utilized in the study, a total of six orders were employed. Participants were informed that they were free to withdraw from the experiment at any time without penalty and that their responses to each of the questionnaires was anonymous. Upon completion of the questionnaires, participants received a debriefing statement (see Appendix F).

CHAPTER III

RESULTS

Means and standard deviations were computed for males and females on all measures and are presented in Table 1. Tests for gender differences found only one significant difference, males scored higher on overall achievement motivation. Because the difference accounted for only 2% of the variance, the participant data was combined. Table 2 contains the bivariate correlations among all variables in the study, along with the coefficient alphas calculated to assess reliability.

The first hypothesis, that individuals with higher levels of perfectionism have higher levels of achievement motivation, was tested using simultaneous regression of overall achievement motivation on the three perfectionism variables. The regression examined the relation of one dimension of perfectionism and overall achievement motivation while controlling for the effects of the remaining perfectionism variables in the model. The results, presented in Table 3, show that the model is significant $F(3, 202) = 35.0, p = .0001$, and accounts for 34 % of data variation in overall achievement motivation. Self-oriented perfectionism and other-oriented perfectionism are significantly positively related to overall achievement motivation ($p < .01$), whereas socially prescribed perfectionism is significantly negatively related to overall achievement motivation ($p < .05$).

Table 1

Means and Standard Deviations For Depression Proneness, Perfectionism, and Achievement Motivation Variables

Variable	Possible Range	Male ^a		Female ^b	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
1. Depression proneness	14 - 126	36.45	14.44	40.78	18.80
2. Self oriented perfectionism	15 - 105	70.03	14.48	69.18	15.62
3. Other oriented perfectionism	15 - 105	57.71	10.43	56.77	11.02
4. Socially prescribed perfectionism	15 - 105	50.71	11.29	50.97	14.19
5. Work ethic	7 - 21	16.18	3.37	15.77	3.79
6. Acquisitiveness (for money)	7 - 21	14.39	2.97	13.61	2.81
7. Dominance	7 - 21	16.09	3.48	15.47	3.59
8. Excellence	7 - 21	20.20	1.34	20.18	1.22
9. Competitiveness	7 - 21	13.73	3.29	13.33	3.31
10. Status aspiration	7 - 21	18.14	2.32	18.43	2.26
11. Mastery	7 - 21	15.71	3.08	14.75	3.33
12. Overall achievement motivation	49 - 147	114.44	12.63	111.54	11.01

Note. ^a $N = 94$

^b $N = 124$

Table 2

Linear Relations Among Depression Proneness, Perfectionism, and Achievement Motivation Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Depression proneness	(.87)											
2. Self oriented perfectionism	-.12	(.86)										
3. Other oriented perfectionism	-.06	.37 **	(.77)									
4. Socially prescribed perfectionism	.28 **	.33 **	.19 **	(.84)								
5. Work ethic	-.28 **	.36 **	.10	-.10	(.74)							
6. Acquisitiveness (for money)	.02	.22 **	.10	.15 *	.01	(.65)						
7. Dominance	-.27 **	.28 **	.35 **	.05	.22 **	.28 **	(.77)					
8. Excellence	-.17 **	.06	.05	-.22 **	.23 **	-.03	.09	(.61)				
9. Competitiveness	.18 **	.37 **	.28 **	.29 **	-.09	.32 **	.16 *	-.09	(.63)			
10. Status aspiration	-.23 **	.30 **	.25 **	.03	.14	.17 **	.53 **	.11	.28 **	(.71)		
11. Mastery	-.35 **	.33 **	.20 **	-.07	.54 **	.00	.36 **	.27 **	-.17 **	.17 **	(.65)	
12. Overall achievement motivation	-.29 **	.54 **	.37 **	.06								(.83)

Note. Cronbach's alpha values reported in parentheses on the diagonal.

* $p < .05$, ** $p < .01$

Table 3

Simultaneous Regression of Achievement Motivation on Perfectionism Variables

Predictor Variables	Standardized Beta Coefficients	Total R - Square	F for Full Equation
Self oriented perfectionism	.37 **		
Other oriented perfectionism	.21 **		
Socially prescribed perfectionism	-.11 *	.34	35.0**

Note. ** $p < .01$, * $p < .05$

To further examine the relation between the factors of perfectionism and the factors of achievement motivation, a canonical correlation was performed. Dimension reduction analysis, using Wilks' Lambda as the criterion for significance, indicated that there were three significant dimensions determining the relation between MPS and CLAMQ. In other words, the relation between perfectionism characteristics and achievement motivation characteristics, as measured by these two inventories, was characterized by several dimensions or factors. These three models have correlation coefficients of .621, .364, and .275.

In order to determine which factors were primarily responsible for the significant relations, an examination of the correlations of each of the inventories' factors with their canonical variates was performed. These correlations indicate the degree to which each of the individual factors contribute to the variability in their respective canonical variates. Those which contribute from each side of the canonical relation are considered to be responsible for the variability in the overall relation between the two sets of factors. In other words, one can determine which factors are contributing the most to the significant canonical relation by examining the correlations of the individual factors with their respective canonical variates. The direction of relations among primary factors can be determined by examining the signs of the correlations of the individual factors with their respective canonical variates. If the signs of the primary factors from both sets of variables are the same, there is a positive relation. If the signs are different, there is an inverse relation. Guidelines suggested by Stevens (1987) for interpreting analogous correlations in principal components analysis were chosen. Stevens suggests using a critical value of $r > .36$ ($n = 200$) to determine which correlations should be interpreted.

The first dimension, $R = .62$, $F(21, 571) = 7.62$, $p < .001$, primarily represents the relation between the MPS factors of self-oriented perfectionism (SOP) and other-oriented perfectionism (OOP) and the CLAMQ factors of work ethic (WE), dominance (DOM), competitiveness (COM), status aspiration (SA), and mastery (MA). For the first dimension, the correlations of these factors with their canonical variates (see Figure 1) indicates that the MPS factors SOP and OOP and the CLAMQ factors of WE, DOM, COM, SA, and MA, all exceed the chosen criterion level. Thus, those individuals who set exacting standards for themselves or others, strive to attain perfection in their endeavors, and strive to avoid failure, tend to work hard, be dominant and a leader, enjoy competition with others, be reinforced by climbing the social status hierarchy, and enjoy tackling a difficult task and succeeding in the face of difficulty.

The second dimension of the canonical relation between the MPS factors and the CLAMQ factors, $R = .364$, $F(12, 400) = 3.89$, $p < .001$, represents the relation between the MPS factor of socially prescribed perfectionism (SPP) and the CLAMQ factors of work ethic (WE), excellence (EX), competitiveness (COM), and mastery (MA). The correlations of these factors with their canonical variates, for the second canonical root (see Figure 2), indicates that the MPS factor, socially prescribed perfectionism, and the CLAMQ factors of work ethic, excellence, and competitiveness, all exceed the chosen criterion level. Thus, those who perceive the demand to attain standards and expectations prescribed by significant others tend to desire not to work hard and are not motivated to achieve excellence or to perform to the best of their ability. However, they report that they do enjoy competition with others.

MPS and CLAMQ: Dimension 1

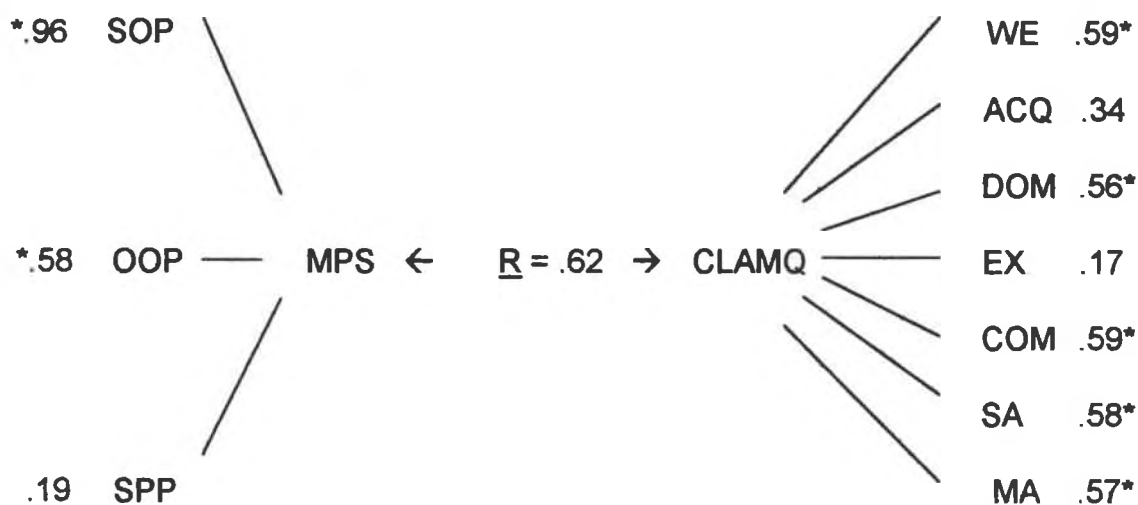


Figure 1. Canonical correlation and correlations with canonical variables: MPS and CLAMQ, Dimension 1. (* indicates correlation exceeds the .36 criterion level.) SOP = self-oriented perfectionism, OOP = other-oriented perfectionism, SPP = socially prescribed perfectionism, WE = work ethic, ACQ = acquisitiveness, DOM = dominance, EX = excellence, COM = competitiveness, SA = status aspiration, MA = mastery.

MPS and CLAMQ: Dimension 2



Figure 2. Canonical correlation and correlations with canonical variables: MPS and CLAMQ, Dimension 2. (* indicates correlation exceeds the .36 criterion level.) SOP = self-oriented perfectionism, OOP = other-oriented perfectionism, SPP = socially prescribed perfectionism, WE = work ethic, ACQ = acquisitiveness, DOM = dominance, EX = excellence, COM = competitiveness, SA = status aspiration, MA = mastery.

The third dimension of the canonical relation between the MPS factors and the CLAMQ factors, $R = .27$, $F(5, 201) = 3.29$, $p < .007$, represents the relation between the MPS factor other oriented perfectionism (OOP) and the CLAMQ factor of dominance (DOM) (see Figure 3). Both the MPS factor of OOP and the CLAMQ factor of DOM exceed the chosen criterion level. Thus, those who set unrealistic standards for significant others also desire to be dominant and to be a leader.

None of the MPS factors were related to the CLAMQ factor of acquisitiveness (ACQ). Therefore, perfectionism characteristics were not related to the desire for money and material wealth. In other words, individuals who have exacting standards for oneself or others, or who perceive that others have exacting standards for themselves, are not necessarily motivated to acquire material rewards.

The second hypothesis, that individuals with higher levels of perfectionism have higher levels of depression proneness, was tested using simultaneous regression. The regression examined the relation of one dimension of perfectionism and depression proneness while controlling for the effects of the remaining perfectionism variables in the model. The results, presented in Table 4, show that the model is significant $F(3, 202) = 10.3$, $p = .0001$, and explains 13.25% of data variation in depression. Socially prescribed perfectionism and depression are significantly positively related ($p = .0001$). Self-oriented perfectionism and depression are significantly negatively related ($p = .0028$), and other-oriented perfectionism is not related to depression. Thus, the hypothesis was supported only for socially prescribed perfectionism.

MPS and CLAMQ: Dimension 3

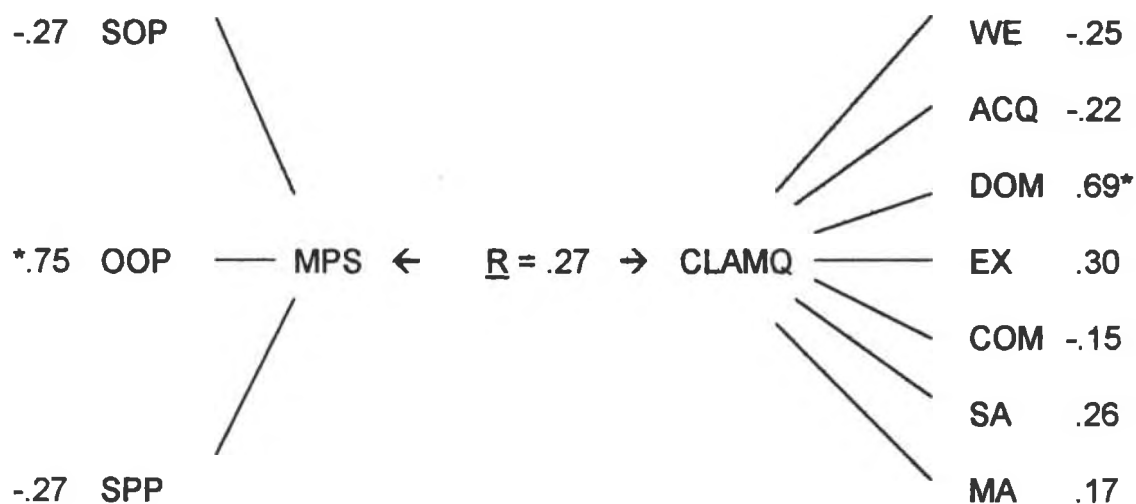


Figure 3. Canonical correlation and correlations with canonical variables: MPS and CLAMQ, Dimension 3. (* indicates correlation exceeds the .36 criterion level.) SOP = self-oriented perfectionism, OOP = other-oriented perfectionism, SPP = socially prescribed perfectionism, WE = work ethic, ACQ = acquisitiveness, DOM = dominance, EX = excellence, COM = competitiveness, SA = status aspiration, MA = mastery.

Table 4

Simultaneous Regression of Depression Proneness on Perfectionism Variables

Predictor Variables	Standardized Beta Coefficients	Total R - Square	F for Full Equation
Self oriented perfectionism	-.27 **		
Other oriented perfectionism	-.09		
Socially prescribed perfectionism	.53 **	.13	10.6**

Note. ** $p < .01$

The third hypothesis, that individuals with higher levels of achievement motivation will have higher levels of depression proneness, was tested using simultaneous regression. The regression examined the relation of one dimension of achievement motivation and depression proneness while controlling for the effects of the remaining achievement motivation variables in the model. The results, presented in Table 5, show that the model is significant $F(3, 202) = 7.1, p = .0001$, and explains 20 % of data variation in depression. Competitiveness was significantly positively related to depression proneness ($p < .05$), and acquisitiveness and mastery were significantly negatively related to depression proneness ($p < .05$). As the first step in a hierarchical regression addressing the fourth hypothesis (see Table 6), depression proneness was regressed on overall achievement motivation. Overall achievement motivation was significantly negatively related to depression proneness $F(1, 204) = 19.9, p = .0001$. Thus, the hypothesis was supported only for the achievement motivation variable of competitiveness.

In order to address the fourth hypothesis, that achievement motivation mediates the effects of perfectionism on depression proneness, a series of regression analyses were computed. Following the recommendations and the procedure of Baron and Kenny (1986), three regressions were performed. Each of these regressions examines the relation of the criterion variable and one dimension of the predictor variables while controlling for the effects of the remaining predictor variables in the model. In the first regression (see Table 3), the mediator (achievement motivation) was regressed on the predictor variables (perfectionism). Significance was attained for all three variables. In the second regression (see Table 4), the criterion variable (depression) was regressed on the predictor variable (perfectionism). Self-oriented perfectionism and socially prescribed

Table 5

Simultaneous Regression of Depression Proneness on Achievement Motivation Variables

Predictor Variables	Standardized Beta Coefficients	Total R - Square	F for Full Equation
Work ethic	-.53	.20	7.13**
Pursuit of excellence	.05		
Status aspiration	-.48		
Dominance	-.79		
Competitiveness	.88 *		
Acquisitiveness (for money)	-1.19 *		
Mastery	-1.09 *		

Note. ** $p < .01$, * $p < .05$

Table 6

Hierarchical Regression of Depression Proneness on Overall Achievement Motivation and Perfectionism Variables

Step	Predictor Variables	Standardized Beta Coefficients	Total R - Square	Change in R - Square	F - Change	F for Full Equation
1	Overall achievement motivation	-.47 **	.09	.09	19.89**	
2	Self oriented perfectionism	-.08	.17	.08	6.43**	11.51**
	Other oriented perfectionism	.01				
	Socially prescribed perfectionism	.44 **				

Note. ** $p < .01$, * $p < .05$

perfectionism attained significance in this step. In the third regression (see Tables 6 and 7), the criterion variable (depression proneness) is regressed on both the predictor variable (perfectionism) and on the mediator (achievement motivation). In order to establish mediation the previously significant relation between the criterion variable (depression proneness) and the predictor variable (perfectionism) must no longer be significant with the mediator (achievement motivation) in the model. Table 6 shows the hierarchical regression using overall achievement motivation as the mediator, entered in Step 1. The change in R-Square when the perfectionism variables are added to the model is .08, F-Change (3, 200) = 6.43, $p < .01$, indicating that the overall achievement motivation does not mediate the link between the full model of perfectionism and depression proneness. Examination of the individual variables, however, reveals that, as predicted, the previously significant relation between self-oriented perfectionism and depression proneness is no longer significant ($p = 0.38$) when the effect of overall achievement motivation is eliminated, indicating that achievement motivation is a mediating variable between self-oriented perfectionism and depression proneness. The previously significant relation between socially prescribed perfectionism and depression proneness remained significant when overall achievement motivation was eliminated, indicating that achievement motivation does not mediate the relation between socially prescribed perfectionism and depression proneness.

Table 7 shows the hierarchical regression using the individual variables of achievement motivation as mediators, entered in Step 1. The change in R-Square when the perfectionism variables are added to the model is .05, F-Change (3, 194) = 4.29 $p < .01$, indicating that the individual achievement motivation variables do not mediate the link

Table 7

Hierarchical Regression of Depression Proneness on Achievement Motivation and Perfectionism Variables

Step	Predictor Variables	Standardized Beta Coefficients	Total R - Square	Change in R - Square	F - Change	F for Full Equation
1	Work ethic	-.32	.20	.20	7.13**	
	Pursuit of excellence	-.07				
	Status aspiration	-.49				
	Dominance	-.13				
	Competitiveness	.67				
	Acquisitiveness (for money)	-.97				
	Mastery	-1.08 *				
2	Self oriented perfectionism	-.10	.25	.05	4.29**	6.53**
	Other oriented perfectionism	.00				
	Socially prescribed perfectionism	.35 **				

Note. ** $p < .01$, * $p < .05$

between the full model of perfectionism and depression proneness. Examination of the individual variables, however, reveals that, as predicted, the previously significant relation between self-oriented perfectionism and depression proneness is no longer significant ($p = 0.28$) when the effect of the individual achievement motivation variables is eliminated, indicating that achievement motivation is a mediating variable between self-oriented perfectionism and depression proneness. Again, the previously significant relation between socially prescribed perfectionism and depression proneness remained significant when achievement motivation was eliminated, indicating that achievement motivation does not mediate the relation between socially prescribed perfectionism and depression proneness.

CHAPTER IV

DISCUSSION

Results from the current study provide mixed support for the hypotheses tested. The first hypothesis, that individuals with higher levels of perfectionism have higher levels of achievement motivation was supported. One interpretation of these results is that part of perfectionists' demands on themselves to perform at very high standards includes a demand to succeed in all areas of their lives. When overall achievement motivation was regressed on the three perfectionism variables, the model accounted for approximately 34% of the variance. This provides evidence supporting Horney's (1950) contention that perfectionists typically are highly motivated to achieve. Horney (1950) stated that perfectionists have learned that recognition of personal worth is dependent upon their level of achievement, and therefore strive to succeed in order to feel positively about themselves. For perfectionists, achievement provides the opportunity to make their imperfections disappear. It allows them to feel as if the perfection they are striving for has been attained (Horney, 1950).

Other theorists have also implied that the constructs of perfectionism and achievement motivation overlap. The definition of perfectionism includes statements such as "the perfectionist can feel worthwhile only if he is competent and achieving in all areas," (Missildine, 1963), and "the perfectionist measures his own worth entirely in terms of productivity and accomplishment," (Burns, 1980). These statements seem similar to Murray's definition of achievement motivation, which states "the need to achieve is a desire or tendency to do things as rapidly and/or as well as possible," and "to master,

manipulate and organize physical objects, human beings, or ideas,” and “to overcome obstacles and attain a high standard. To excel one’s self” (Murray, 1938, p.60). An important component of perfectionism is achievement motivation; however, individuals with high levels of achievement motivation do not necessarily have high levels of perfectionism.

The canonical correlation indicated three significant dimensions determining the relations between the perfectionism variables and the achievement factors. The first dimension accounted for 38% of the variance, with two subscales of the MPS (self oriented and other oriented) and five subscales of the CLAMQ (work ethic, dominance, competitiveness, status aspiration, and mastery) contributing significantly to the relation. The self oriented and other oriented perfectionism subscales may be seen as being similar in content. Both demand high standards of performance set by the individual; the difference between the scales has to do with whether the standards of performance are expected of themselves or of others. These high standards that perfectionists set appear to be related to their own internal desire to work hard, compete with others, tackle difficult tasks, achieve social status, and be dominant or a leader. These variables may be seen as the areas of achievement where self or other oriented perfectionists motivate themselves and expect others to be motivated similarly. For the self oriented perfectionist work ethic and mastery may be beneficial attributes to have, but being competitive, dominant, and seeking status may lead to interpersonal conflicts when they become antagonistic.

This internal motivation is in contrast to socially prescribed perfectionism, where the high standards of performance are attributed to others. This subscale of the MPS was negatively related to the CLAMQ subscales of work ethic, excellence, and mastery, but positively related to competitiveness, accounting for 13% of the variance. Because the standards of performance for socially prescribed perfectionists are attributed to others,

individuals with higher levels of socially prescribed perfectionism may be seen as being expected by others to perform well. These individuals do not have higher levels of achievement motivation, and thus most probably are often faced with feelings of not meeting others' expectations. One possible explanation for the relation among these variables may be that individuals who are driven by others do not develop their own internal desire to work hard, to tackle difficult tasks for their own sake, or to find reward in performing to the best of their abilities. These individuals may be seen as externally motivated rather than having intrinsic motivation. They receive reinforcement from achieving only because it satisfies others.

The second hypothesis, that individuals with higher levels of perfectionism are more prone to becoming depressed, received mixed support. When depression proneness was regressed on the three perfectionism variables, the model was significant and accounted for 13% of the variance. Further analyses, however, showed that only socially prescribed perfectionism is positively correlated with depression. Individuals who believe that their significant others hold unreasonably high standards for their performance are more likely to become depressed. One interpretation of these results is that individuals who perceive a demand to attain unrealistically high standards to meet others' expectations are more likely to feel like failures because they can not or do not meet these standards. Because the perfectionistic demands perceived by individuals with higher levels of socially prescribed perfectionism are attributed to significant others in their lives, it is important to these individuals to perform at a level that will meet their expectations. When these standards are not attained, individuals may feel that they have "let down" people who are important to them or that they have failed them. This feeling of failure, along with fear of rejection, may prompt depression. Another explanation is that

depression may influence an individual's perception of others. That is, one who is depressed may see significant others as being more critical.

Self-oriented perfectionism, on the other hand, was found to be negatively correlated with depression. Individuals with higher levels of self-oriented perfectionism, those who set exacting standards for themselves, are less prone to becoming depressed. This finding is in the opposite direction from that predicted by the researcher. A possible explanation for this finding is that perfectionists with higher levels of self-oriented perfectionism are striving to achieve and, in so doing, actually achieve. This may lead to higher levels of accomplishment, reinforcing perfectionists for their behavior and decreasing the possibility of depression.

The third hypothesis, that individuals who report higher levels of achievement motivation will be more prone to depression, was not supported. Achievement motivation is significantly correlated with depression proneness; however, they are negatively related. This suggests that individuals who strive to attain excellence and mastery, and to overcome obstacles to excel, are less likely to become depressed. A possible explanation for this finding may be that those who strive to achieve feel competent when they overcome obstacles. This feeling of competence insulates those high in achievement motivation, decreasing the likelihood of depression. Further, those who are high in achievement motivation most probably accomplish more than those lower in achievement motivation. This sense of accomplishment provides reinforcement for those high in achievement motivation, subsequently decreasing the probability of depression. Alternatively, the negative correlation may be related to energy level. Those who are prone to depression may be unlikely to feel energized enough to achieve.

The fourth hypothesis, that achievement motivation mediates the link between perfectionism and depression, received mixed support. Achievement motivation was

found to mediate the link between self-oriented perfectionism and depression. When the effect of achievement motivation was eliminated, the negative relation between self-oriented perfectionism and depression was no longer significant. Thus, those individuals higher in self-oriented perfectionism are less likely to become depressed only when their perfectionism is accompanied by higher levels of achievement motivation.

One interpretation of this finding may be that those individuals who set exacting standards for themselves and who also have a desire for mastery and excellence are achieving at these higher levels. The higher level of achievement motivation drives the perfectionist to continue, even in the face of imperfection, until a quality of performance is achieved that meets the individual's exacting standards. This accomplishment reinforces the individual's high need for achievement, as well as avoids failure, which in turn decreases the likelihood of the individual becoming depressed. That is not to say that those individuals who have higher levels of self-oriented perfectionism but do not have higher levels of achievement motivation will necessarily become depressed. It is as if achievement motivation serves as a type of resilience, driving the perfectionist to continue when he encounters failure (imperfect performance). Achievement motivation, then, would seem to protect the self-oriented perfectionist from depression, rather than increase the likelihood of depression, as hypothesized. In our culture achievement is valued, and to be "perfect" one must be a high achiever. Thus, having higher levels of achievement motivation helps the self-oriented perfectionist toward his goal of attaining perfection.

The mediational model suggests that the path from perfectionism to depression can be an indirect one with achievement motivation mediating the connection. This result has important implications for counseling perfectionistic and/or depressed clients. For example, when the presenting concern of clients is depression, intake procedures could include the assessment of the clients' socially prescribed perfectionism or self oriented

perfectionism and his or her motivation for achievement. A counselor could determine whether the clients have the belief that others have perfectionistic expectations and motives for them or if the standards are self-imposed. If the clients place emphasis on attaining expectations prescribed by significant others, it may be beneficial to work on increasing achievement motivation as well as changing perfectionistic patterns. In this way, the mediator is strengthened and may lead to the alleviation of depression.

Additionally, this has implications for parents and educators. Parents can help decrease the possibility for future depression in their children by encouraging their children's achievement motivation and by assuring their children that perfection is not necessary in order to achieve competence. Educators may also strive to increase students' achievement motivation and thus decrease the possibility for future depression. Some students may perceive teachers as significant others who prescribe unrealistic expectations.

Allowing the socially prescribed perfectionistic student to negotiate what he or she believes to be realistic expectations may decrease their focus on meeting others' perceived unrealistic standards. Teachers may also allow perfectionistic students to take risks with minimal initial judgement which may allow them to feel freer to be less precise as the situation permits. With these interventions children may decrease their levels of socially prescribed perfectionism or increase achievement motivation and be less prone to depression.

Strengths, Limitations and Conclusions

The present study was designed to analyze the data using regression and multivariate statistics rather than first-order correlations in the interpretation of the data. This allowed for analysis of the perfectionism and achievement variables which are related to depression proneness while controlling for intercorrelations among the measures.

Results of this study provide construct validity for the constructs of perfectionism and achievement motivation. Of particular interest are the significant positive relations between self oriented perfectionism and achievement motivation and the positive relation of socially prescribed perfectionism and depression proneness, as well as the significant negative relations between achievement motivation and depression proneness.

There are several limitations of this study that should be addressed.

First, it should be pointed out that this study was correlational and that the sample was, for the most part, white undergraduate students with a mean age of 18.8. The results from this homogeneous sample may not be generalizable to other samples. For example, other cultures may have different perceptions and their perfectionism may be related to feelings other than depression. Future research should include different ages, different cultures, and clinical populations. The correlational nature of this study also prevents one from implying causality. It is important that longitudinal research be conducted to determine whether perfectionism and achievement motivation are causes or only correlates of depression proneness.

The current findings are based entirely on questionnaire responses. Problems with self-report data may limit the interpretability of the results of this study. Defensiveness and social desirability are likely to affect the manner in which subjects answer the self-report questionnaires, particularly the achievement motivation questionnaire. Reports of attitudes are likely to be different from actual behavior. Future research could investigate the associations among perfectionism, achievement motivation, and depression utilizing more diverse methodologies and samples than were reported here.

APPENDICES

APPENDIX A

DEMOGRAPHIC INFORMATION COVER SHEET

Demographic Sheet

Sex: _____ **Female**

_____ **Male**

Age: _____

Class: _____ **Freshman**

_____ **Sophomore**

_____ **Junior**

_____ **Senior**

Education level with which I will be satisfied:

_____ **Some college**

_____ **College diploma**

_____ **Graduate degree**

APPENDIX B

MULTIDIMENSIONAL PERFECTIONISM SCALE

(MPS)

(Hewitt & Flett, 1991b)

Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. If you *strongly agree*, fill in circle 7 on the scantron; if you *strongly disagree*, fill in circle 1 on the scantron; if you feel somewhere in between, fill in any one of the numbers between 1 and 7 on the scantron. If you feel neutral or undecided the midpoint is 4.

Disagree							Agree
1	2	3	4	5	6	7	

1. When I am working on something, I cannot relax until it is perfect.
2. I am not likely to criticize someone for giving up too easily.
3. It is not important that the people I am close to are successful.
4. I seldom criticize my friends for accepting second best.
5. I find it difficult to meet others' expectations of me.
6. One of my goals is to be perfect in everything I do.
7. Everything that others do must be of top-notch quality.
8. I never aim for perfection in my work.
9. Those around me readily accept that I can make mistakes too.
10. It doesn't matter when someone close to me does not do their absolute best.
11. The better I do, the better I am expected to do.
12. I seldom feel the need to be perfect.
13. Anything I do that is less than excellent will be seen as poor work by those around me.
14. I strive to be as perfect as I can be.
15. It is very important that I am perfect in everything I attempt.
16. I have high expectations for the people who are important to me.
17. I strive to be the best at everything I do.
18. The people around me expect me to succeed at everything I do.
19. I do not have very high standards for those around me.
20. I demand nothing less than perfection of myself.

-
21. Others will like me even if I don't excel at everything.
 22. I can't be bothered with people who won't strive to better themselves.
 23. It makes me uneasy to see an error in my work.
 24. I do not expect a lot from my friends.
 25. Success means that I must work even harder to please others.
 26. If I ask someone to do something, I expect it to be done flawlessly.
 27. I cannot stand to see people close to me make mistakes.
 28. I am perfectionistic in setting my goals.
 29. The people who matter to me should never let me down.
 30. Others think I am okay, even when I do not succeed.
 31. I feel that people are too demanding of me.
 32. I must work to my full potential at all times.
 33. Although they may not show it, other people get very upset with me when I slip up.
 34. I do not have to be the best at whatever I am doing.
 35. My family expects me to be perfect.
 36. I do not have very high goals for myself.
 37. My parents rarely expected me to excel in all aspects of my life.
 38. I respect people who are average.
 39. People expect nothing less than perfection from me.
 40. I set very high standards for myself.
 41. People expect more from me than I am capable of giving.
 42. I must always be successful at school or work.
 43. It does not matter to me when a close friend does not try their hardest.
 44. People around me think I am still competent even if I make a mistake.
 45. I seldom expect others to excel at whatever they do.
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APPENDIX C

CASSIDY & LYNN ACHIEVEMENT MOTIVATION QUESTIONNAIRE

(CLAMQ)

(Cassidy & Lynn, 1989)

Listed below are a number of statements concerning personal characteristics and traits. Read each item and decided whether you agree or disagree with the statement. If you agree, fill in circle 1 on the scantron; if you disagree, fill in circle 3 on the scantron; if you feel neutral or undecided, fill in circle 2 on the scantron.

1 = agree

2 = neutral or undecided

3 = disagree

1. I like to work hard.
2. The most important thing about a job is the pay.
3. When a group I belong to plans an activity I would rather direct it myself than just help out and have someone else organize it.
4. There is satisfaction in a job well done.
5. It is important to me to perform better than others on a task.
6. I find satisfaction in having influence over others because of my position in the community.
7. I feel like giving up quickly when things go wrong.
8. Hard work is something I like to avoid.
9. If there is an opportunity to earn money, I am usually there.
10. I think I would enjoy having authority over other people.
11. I hate to see bad workmanship.
12. I try harder when I'm in competition with other people.
13. I would like an important job where people looked up to me.
14. I would rather do something at which I feel confident and relaxed than something which is challenging and difficult.
15. I can easily sit for a long time doing nothing.
16. I would be willing to work for a salary that was below average if the job was pleasant.

- 1 = agree
- 2 = neutral or undecided
- 3 = disagree

- 17. If given the chance I would make a good leader of people.
- 18. Part of the satisfaction in doing something comes from seeing how good the finished product looks.
- 19. It annoys me when other people perform better than I do.
- 20. I like talking to people who are important.
- 21. I would rather learn easy fun games than difficult thought games.
- 22. I must admit I often do as little work as I can get away with.
- 23. The kind of work I like is the one that pays top salary for top performance.
- 24. I think I am usually a leader in my group.
- 25. It is no use playing a game when you are playing with someone as good as yourself.
- 26. I judge my performance on whether I do better than others rather than on just getting a good result.
- 27. I want to be an important person in the community.
- 28. If I'm not good at something I would rather keep struggling to master it than move on to something I may be good at.
- 29. I am basically a lazy person.
- 30. As long as I'm paid for my work, I don't mind working while others are having fun.
- 31. I enjoy planning things and deciding what other people should do.
- 32. I get a sense of satisfaction out of being able to say I have done a very good job on a project.
- 33. If I get a good result, it doesn't matter if others do better.
- 34. I like to be admired for my achievements.

- 1 = agree
- 2 = neutral or undecided
- 3 = disagree

- 35. I prefer to work in situations that require a high level of skill.
- 36. I often put off until tomorrow things I know I should do today.
- 37. I frequently think about what I might do to earn a great deal of money.
- 38. I like to give orders and get things going.
- 39. I find satisfaction in working as well as I can.
- 40. I would never allow others to get the credit for what I have done.
- 41. I dislike being the center of attention.
- 42. I more often attempt tasks that I am not sure I can do than tasks I know I can do.
- 43. I easily get bored if I don't have something to do.
- 44. It is important to me to make lots of money.
- 45. People take notice of what I say.
- 46. I find satisfaction in exceeding my previous performance even if I don't outperform others.
- 47. To be a real success I feel I have to do better than everyone I come up against.
- 48. I like to have people come to me for advice.
- 49. I like to be busy all the time.

APPENDIX D

COSTELLO-COMREY DEPRESSION SCALE

(CCDS)

(Costello & Comrey, 1967)

On this questionnaire there are a number of statements with response choices listed below each statement. Please read each statement carefully. Then fill in the circle on the scantron corresponding to the appropriate choice which most accurately describes the way you have generally felt during the past few years.

1. I feel that life is worthwhile.

9-Absolutely;	8-Very definately;	7-Definately;
6-Probably;	5-Possibly;	4-Probably not;
3-Definately not;	2-Very definately not;	
1-Absolutely not.		

2. When I wake up in the morning I expect to have a miserable day.

9-Always;	8-Almost always;	7-Usually;
6-Frequently;	5-Fairly often;	4-Occasionally;
3-Rarely;	2-Almost never;	1-Never.

3. I wish I were never born.

9-Absolutely;	8-Very definately;	7-Definately;
6-Probably;	5-Possibly;	4-Probably not;
3-Definately not;	2-Very definately not;	
1-Absolutely not.		

4. I feel that there is more disappointment in life than satisfaction.

9-Absolutely;	8-Very definately;	7-Definately;
6-Probably;	5-Possibly;	4-Probably not;
3-Definately not;	2-Very definately not;	
1-Absolutely not.		

5. I want to run away from everything.

9-Always;	8-Almost always;	7-Usually;
6-Frequently;	5-Fairly often;	4-Occasionally;
3-Rarely;	2-Almost never;	1-Never.

6. My future looks hopeful and promising.

9-Absolutely;	8-Very definately;	7-Definately;
6-Probably;	5-Possibly;	4-Probably not;
3-Definately not;	2-Very definately not;	
1-Absolutely not.		

7. When I get up in the morning I expect to have an interesting day.

9-Always;	8-Almost always;	7-Usually;
6-Frequently;	5-Fairly often;	4-Occasionally;
3-Rarely;	2-Almost never;	1-Never.

8. Living is a wonderful adventure for me.

9-Always;	8-Almost always;	7-Usually;
6-Frequently;	5-Fairly often;	4-Occasionally;
3-Rarely;	2-Almost never;	1-Never.

9. I am a happy person.

9-Always;	8-Almost always;	7-Usually;
6-Frequently;	5-Fairly often;	4-Occasionally;
3-Rarely;	2-Almost never;	1-Never.

10. Things have worked out well for me.

9-Absolutely;	8-Very definitely;	7-Definitely;
6-Probably;	5-Possibly;	4-Probably not;
3-Definitely not;	2-Very definitely not;	
1-Absolutely not.		

11. The future looks so gloomy that I wonder if I should go on.

9-Always;	8-Almost always;	7-Usually;
6-Frequently;	5-Fairly often;	4-Occasionally;
3-Rarely;	2-Almost never;	1-Never.

12. I feel that life is drudgery and boredom.

9-Always;	8-Almost always;	7-Usually;
6-Frequently;	5-Fairly often;	4-Occasionally;
3-Rarely;	2-Almost never;	1-Never.

13. I feel blue and depressed.

9-Always;	8-Almost always;	7-Usually;
6-Frequently;	5-Fairly often;	4-Occasionally;
3-Rarely;	2-Almost never;	1-Never.

14. When I look back I think life has been good to me.

9-Absolutely;

6-Probably;

3-Definitely not;

1-Absolutely not.

8-Very definitely;

5-Possibly;

2-Very definitely not;

7-Definitely;

4-Probably not;

APPENDIX E

INFORMED CONSENT FORM

You are asked to participate in a study of personality variables. This study is part of a master's thesis in clinical psychology.

If you decide to participate you will be given a folder containing a demographic information sheet and four questionnaires. You will not put your name on any of the materials in the folder. I want your responses to be completely anonymous. There will be no way to match your responses with your name, and I am hoping that you will feel completely free to respond honestly to the questionnaire. It will take less than one hour to complete the four questionnaires. All original data will be stored by the experimenter.

Your decision whether or not to participate will not prejudice your future relations with the University of Dayton. If you decide to participate, you are free to discontinue participation at any time; you will still receive full credit. If you have any questions about this study, please contact Dr. Judith Allik, 303 St. Joseph Hall (229-2716), or Hal Guterman (252-9292). If you sign this form please bring it to the front and pick up a folder.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above and have decided to participate. You may withdraw at any time without prejudice after signing this form, should you choose to discontinue participation in this study.

Signature of Participant

Date

APPENDIX F

DEBRIEFING STATEMENT

The study in which you have just participated is an investigation of the vulnerability to depression among college students. Some students tend to have higher expectations of themselves and their quality of performance, and tend to have high needs to achieve goals. We have predicted that students with high expectations of themselves and a strong desire to achieve will often be disappointed and will be more prone to depression and less satisfied with their lives than will students without such high expectations. Thus, this is a correlational design. We want to see how personality measures relate to vulnerability to depression and life satisfaction.

If you would like more information on these topics, we suggest you read articles written by Burns (1980), Hamachek (1978), and Spence & Helmreich (1983).

One of the questionnaires you have completed was a measure of depression proneness. Because your responses were completely anonymous, we have no way of identifying any student whose responses would indicate that they may be apt to become depressed. If you believe that your responses indicate that you are feeling depressed, you should talk with someone at the University Counseling Center. They will be able to help you. All undergraduates have already paid a student fee which covers the cost of their services, so there will be no charge. The Counseling Center is located in Gosiger Health Center and the telephone number is 229-3141.

If you have any questions, contact Dr. Judith Allik, 303 St. Joseph Hall (229-2716), or Hal Guterman (252-9292). Thank you for your participation.

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